

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the instant application:

15-35 Cancelled

36. (New) An antimicrobial and non-cytotoxic layered material, comprising:

- a) a biocide layer having a biocidal active agent,  
and
- b) a transport control layer covering the biocide layer, having a thickness and porosity adjusted to release an antimicrobial and non-cytotoxic quantity of the biocidal active agent out of the biocide layer and through the transport control layer,

wherein the transport control layer is a plasma polymer layer and/or a sputter-applied layer and wherein the transport control layer has a silicon content of 20 to 60%, a carbon content of 10 to 30% and an oxygen content of 30 to 50%.

37. (New) A layered material according to claim 36, wherein the transport control layer has a gas permeability for oxygen ( $O_2$ ) which is in the range from 100 to 1000 ( $cm^3$  bar)/(day  $m^2$ )

38. (New) A layered material according to claim 36, wherein the transport control layer has a gas permeability for oxygen ( $O_2$ ) which is preferably in the range from 500 to 700 ( $cm^3$  bar)/(day  $m^2$ ).
39. (New) A layered material according to claim 36, wherein the biocidal active agent is selected from the group consisting of silver, copper and zinc, their ions and their metal complexes, or a mixture or alloy comprising two or more of said elements.
40. (New) A layered material according to claim 36, wherein the biocidal active agent is an inorganic biocide having a mean particle size of 5-100 nm.
41. (New) A layered material according to claim 36, wherein the biocide layer further comprises: gold, platinum, palladium, iridium, tin, antimony, their ions, their metal complexes, or an alloy of the biocidal active agent with one or more of said elements.
42. (New) A layered material according to claim 36, wherein the transport control layer comprises a substrate material that is selected from the group consisting of
- a) an organic substrate material, selected from the group consisting of a plasma polymer, a sol-gel, a coating, and a siliconised substrate material,
  - b) an inorganic substrate material, selected from the group consisting of  $SiO_2$  and  $SiC$ , a metal oxide and a non-biocidal metal, and
  - c) a combination thereof.

43. (New) A layered material according to claim 42, wherein the metal oxide is  $\text{TiO}_2$ ,  $\text{Al}_2\text{O}_3$  or a combination thereof, and wherein the non-biocidal metal is titanium, medical stainless steel, or a combination thereof.
44. (New) A layered material according to claim 36, wherein the biocide layer has a mean thickness of 5-100 nm.
45. (New) A layered material according to one claim 36, wherein the transport control layer has a mean thickness of 5-500 nm.
46. (New) A medical product comprising an antimicrobial, non-cytotoxic layered material according to claim 36.
47. (New) A method for producing an antimicrobial, non-cytotoxic layered material according to claim 36, comprising by the steps:
  - a) providing a solid body provided with a biocide,  
and
  - b) providing the solid body with a transport control layer, in order to release an antimicrobial and non-cytotoxic quantity of the biocidal active agent out of the biocide layer and through the transport control layer, by plasma polymerisation

and/or by sputter application, such that the transport control layer has a silicon content of 20 to 60%, a carbon content of 10 to 30% and an oxygen content of 30 to 50%.